What is claimed:

1. A system for transmitting a digital image over a communication network, comprising:

    (a) an image storage device for storing a digital image;

    (b) a client computer coupled to the communication network, wherein the client computer generates and transmits across the communication network coordinates defining a region of interest within the digital image;

    (c) a server computer, coupled to the communication network and the image storage device, wherein the server computer performs the steps of:

        (i) pre-processing the digital image through a lossless wavelet transformation;

        (ii) receiving the coordinates from the client computer; and

        (iii) progressively transmitting to the client computer the region of interest within the digital image defined by the coordinates.

2. The system of claim 1, wherein the server computer progressively transmits the region of interest to a selected quality threshold.

3. The system of claim 1, wherein the server computer progressively transmits the region of interest to lossless quality.

4. The system of claim 1, wherein the client computer reverse transforms the region of interest received from the server computer, to form a lossless reproduction of the digital image.

5. The system of claim 4, wherein client computer displays the lossless reproduction of the digital image on a web browser resident on the client computer.

6. The system of claim 1, wherein the server computer performs the pre-processing step through a lossless wavelet transformation comprising two non-identical one-dimensional transforms.

7. A system for transmitting a digital image over a communication network, comprising:

> (a) an image storage device for storing a digital image;

> (b) a client computer coupled to the communication network, wherein the client computer generates and transmits across the communication network coordinates defining a region of interest within the digital image;

> (c) a server computer, coupled to the communication network and the image storage device, wherein the server computer performs the steps of:
>> (i) pre-processing the digital image through a lossless wavelet transformation;
>> (ii) generating wavelet coefficients corresponding to the digital image;
>> (iii) generating half-bit flags, each half-bit flag corresponding to a wavelet coefficient;
>> (iv) receiving the coordinates from the client computer;
>> (v) progressively transmitting to the client computer the region of interest within the digital image defined by the coordinates, based on the wavelet coefficients and the corresponding half-bit flags.

8. The system of claim 7, wherein the server computer progressively transmits the region of interest to a selected quality threshold.

9. The system of claim 7, wherein the server computer progressively transmits the region of interest to lossless quality.

10. The system of claim 7, wherein the client computer reverse transforms the region of interest received from the server computer, to form a lossless reproduction of the digital image.

11. The system of claim 10, wherein client computer displays the lossless reproduction of the digital image on a web browser resident on the client computer.

12. The system of claim 7, wherein the server computer performs the pre-processing step through a lossless wavelet transformation comprising two non-identical one-dimensional transforms.

13. A method for transmitting a digital image from a server computer to a client computer, wherein the client computer generates coordinates defining a region of interest within the digital image, and transmits the coordinates to the server computer, the method comprising the steps of:

      (a) storing a digital image within an image storage device;

      (b) pre-processing the digital image through a lossless wavelet transformation;

      (c) receiving the coordinates at the server computer from the client computer; and

      (d) progressively transmitting from the server computer to the client computer the region of interest within the digital image defined by the coordinates.

14. The method of claim 13, wherein the server computer progressively transmits the region of interest to a selected quality threshold.

15. The method of claim 13, wherein the server computer progressively transmits the region of interest to lossless quality.

16. The method of claim 13, further comprising the step of reverse transforming at the client computer the region of interest received from the server computer, to form a lossless reproduction of the digital image.

17. The method of claim 16, further comprising the step of displaying at the client computer the lossless reproduction of the digital image on a web browser resident on the client computer.

18. The method of claim 13, wherein the pre-processing step is performed through a lossless wavelet transformation comprising two non-identical one-dimensional transforms.

19. A method for transmitting a digital image from a server computer to a client computer, wherein the client computer generates coordinates defining a region of interest within the digital image, and transmits the coordinates to the server computer, the method comprising the steps of:

> (a) storing a digital image within an image storage device;

> (b) pre-processing the digital image through a lossless wavelet transformation;

> (c) receiving the coordinates at the server computer from the client computer; and

> (d) generating wavelet coefficients corresponding to the digital image;

> (e) generating half-bit flags, each half-bit flag corresponding to a wavelet coefficient;

(f) receiving the coordinates at the server computer from the client computer; and

(g) progressively transmitting from the server computer to the client computer the region of interest within the digital image defined by the coordinates, based on the wavelet coefficients and the corresponding half-bit flags.

20. The method of claim 19, wherein the server computer progressively transmits the region of interest to a selected quality threshold.

21. The method of claim 19, wherein the server computer progressively transmits the region of interest to lossless quality.

22. The method of claim 19, further comprising the step of reverse transforming at the client computer the region of interest received from the server computer, to form a lossless reproduction of the digital image.

23. The method of claim 22, further comprising the step of displaying at the client computer the lossless reproduction of the digital image on a web browser resident on the client computer.

24. The method of claim 19, wherein the pre-processing step is performed through a lossless wavelet transformation comprising two non-identical one-dimensional transforms.

25. A server computer for transmitting a digital image to a client computer, wherein the client computer generates and transmits to the server computer coordinates defining a region of interest within the digital image, the server computer comprising:

(a) an image storage device for storing the digital image;

(b) a processor for performing the steps of:

(i) pre-processing the digital image through a lossless wavelet transformation;

(ii) receiving the coordinates from the client computer; and

(iii) progressively transmitting to the client computer the region of interest within the digital image defined by the coordinates.

26. The system of claim 25, wherein the server computer progressively transmits the region of interest to a selected quality threshold.

27. The system of claim 25, wherein the server computer progressively transmits the region of interest to lossless quality.

28. The system of claim 25, wherein the client computer reverse transforms the region of interest received from the server computer, to form a lossless reproduction of the digital image.

29. The system of claim 28, wherein client computer displays the lossless reproduction of the digital image on a web browser resident on the client computer.

30. The system of claim 25, wherein the server computer performs the pre-processing step through a lossless wavelet transformation comprising two non-identical one-dimensional transforms.

31. A server computer for transmitting a digital image to a client computer, wherein the client computer generates and transmits to the server computer coordinates defining a region of interest within the digital image, the server computer comprising:

(a) an image storage device for storing the digital image;

(b) a processor for performing the steps of:

(i) pre-processing the digital image through a lossless wavelet transformation;

(ii) generating wavelet coefficients corresponding to the digital image;

(iii) generating half-bit flags, each half-bit flag corresponding to a wavelet coefficient;

(iv) receiving the coordinates from the client computer;

(v) progressively transmitting to the client computer the region of interest within the digital image defined by the coordinates, based on the wavelet coefficients and the corresponding half-bit flags.

32. The system of claim 31, wherein the server computer progressively transmits the region of interest to a selected quality threshold.

33. The system of claim 31, wherein the server computer progressively transmits the region of interest to lossless quality.

34. The system of claim 31, wherein the client computer reverse transforms the region of interest received from the server computer, to form a lossless reproduction of the digital image.

35. The system of claim 34, wherein client computer displays the lossless reproduction of the digital image on a web browser resident on the client computer.

36. The system of claim 31, wherein the server computer performs the pre-processing step through a lossless wavelet transformation comprising two non-identical one-dimensional transforms.